

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
16 October 2003 (16.10.2003)

PCT

(10) International Publication Number
WO 03/084949 A1(51) International Patent Classification⁷: C07D 401/06,
409/14, 401/14, A61K 31/44, A61P 25/06

(21) International Application Number: PCT/US03/08455

(22) International Filing Date: 27 March 2003 (27.03.2003)

(25) Filing Language: English

(26) Publication Language: English

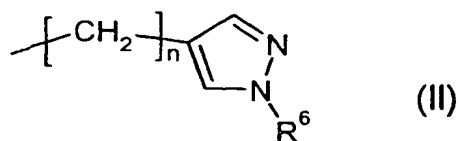
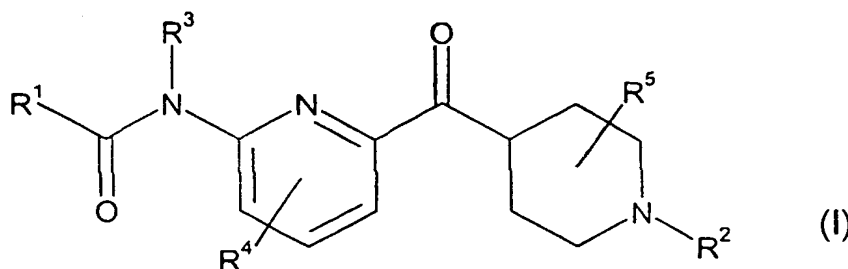
(30) Priority Data: 60/369,088 29 March 2002 (29.03.2002) US

(71) Applicant (for all designated States except US): ELI
LILLY AND COMPANY [US/US]; Lilly Corporate
Center, Indianapolis, IN 46285 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): COHEN, Michael,
Philip [US/US]; 8141 Bowline Court, Indianapolis, IN
46236 (US). KOHLMAN, Daniel, Timothy [US/US];
6281 East Old Otto Court, Camby, IN 46113 (US).
LIANG, Sidney, Xi [US/US]; 79 Carriage Drive, Bethany,
CT 06524 (US). MANCUSO, Vincent [BE/BE]; Lilly
MSG Development Centre S.A., Rue Granbompre', 11,
B-1338 Mont-Saint-Guibert (BE). VICTOR, Frantz
[US/US]; 4855 North Tuxedo Street, Indianapolis, IN46205 (US). XU, Yao-Chang [CA/US]; 10815 Timber
Springs Drive East, Fishers, IN 46038 (US). YING,
Bai-Ping [US/US]; 7717 Hidden Ridge, Fishers, IN 46038
(US). ZACHERL, DeAnna, Piatt [US/US]; 8555 Provi-
dence Drive, Noblesville, IN 46060 (US). ZHANG, Deyi
[CN/US]; 1372 Kirklees Drive, Carmel, IN 46032 (US).(74) Agents: TUCKER, R., Craig et al.; Eli Lilly And Com-
pany, P.O. Box 6288, Indianapolis, IN 46206-6288 (US).(81) Designated States (national): AE, AG, AL, AM, AT (uti-
lity model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,
CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (uti-
lity model), DE, DK (utility model), DK, DM, DZ, EC, EE
(utility model), EE, ES, FI (utility model), FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,
MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU,
SC, SD, SE, SG, SK (utility model), SK, SL, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: PYRIDINOYLPIPERIDINES AS 5-HT_{1F} AGONISTS

(57) Abstract: The present invention relates to compounds of formula I: or pharmaceutically acceptable acid addition salts thereof, where; R₁ is C1-C6 alkyl, substituted C1-C6 alkyl, C3-C7 cycloalkyl, substituted C3-C7 cycloalkyl, C3-C7 cycloalkyl-C1-C3 alkyl, substituted C3-C7 cycloalkyl-C1-C3 alkyl, phenyl, substituted phenyl, heterocycle, or substituted heterocycle; R₂ is hydrogen, C1-C3 alkyl, C3-C6 cycloalkyl-C1-C3 alkyl, or a group of formula II; R₃ is hydrogen or C1-C3 alkyl; R₄ is hydrogen, halo, or C1-C3 alkyl; R₅ is hydrogen or C1-C3 alkyl; R₆ is hydrogen or C1-C6 alkyl; and n is an integer from 1 to 6 inclusively. The compounds of the present invention are useful for activating 5-HT_{1F} receptors,

inhibiting neuronal protein extravasation, and for the treatment or prevention of migraine in a mammal. The present invention also relates to a process for the synthesis of intermediates in the synthesis of compounds of Formula I.